

EVANS (E.C.)

acute articular rheumatism

ACUTE ARTICULAR  
RHEUMATISM.

(EVANS.)







SURGEON GEN'L'S OFFICE  
455-  
LIBRARY

REPRINT FROM

# THE MEDICAL WORLD.

*The knowledge that a man can use is the only real knowledge; the only knowledge that has life and growth in it and converts itself into practical power. The rest hangs like dust about the brain, or dries like raindrop off the stones.*—FROUDE.

## The Medical World.

Published Monthly, by C. F. Taylor, M. D.

C. F. TAYLOR, M. D.,  
L. LEWIS, M.D., M.R., C.S. (Eng.)  
J. J. TAYLOR, M. D.  
W. H. WALLING, M. D.,

EDITORS.

Subscription to any part of the United States and Canada, ONE DOLLAR per year. To England and the British Colonies, FIVE SHILLINGS per year. Postage free. Single copies, TEN CENTS. These rates must be paid *invariably in advance*.

We cannot always supply back numbers. Should a number fail to reach a subscriber, we will supply another, if notified before the end of the month.

Pay no money to agents for this journal unless publisher's receipt is given.

ADDRESS ALL COMMUNICATIONS TO

**"THE MEDICAL WORLD,"**

1520 Chestnut Street,

PHILADELPHIA, PA.

VOL. IX. FEBRUARY, 1891. No. 2.

### Acute Articular Rheumatism.

By E. C. EVANS, M. D.

The nature of this disease is not as yet satisfactorily settled by pathologists. It is held that the disease is a textural change due to chill acting on the part, either through the circulation or nervous system, causing a lowering of the nutrition of the structure; or it may be a disturbance of the heat-regulating mechanism of the body by chill, producing suppression of the functions of the skin.

The lactic acid theory has a large following, but the presence of lactic acid in the blood is not *prima facie* evidence that it is in itself the essential cause giving rise to rheumatism; instead of

being the materies morbi, it may only be a symptom; a result and not a cause.

In rheumatism, derangements exist in the assimilating organs. The loss of power and great pain usually present may explain the formation of a very appreciable excess of lactic acid in the perspiration and urine; for nearly all the organs are more or less involved by sympathy, if nothing more, and their functions paralyzed. Therefore, there is imperfect assimilation, and an accumulation of foreign matter, (it may be lactic acid) which is absorbed, infecting the blood and tending to continue the trouble.

It has been said that rheumatism is produced by a micro-organism, analogous to the "bacillus malaria." While this is possible, indeed probable, it yet remains to be proven; it also remains to be seen if the same agent or product, acting within the system, gives rise to both the acute and chronic forms of the disease, as well as the form known as muscular rheumatism. However, in those years when malarial fevers were most prevalent, there was the smallest number of cases of rheumatic fever, and vice versa. Also the special times of greatest prevalence of rheumatism were generally from five to ten days after a copious rainfall, which would correspond with the time when miasms or infections developed in the soil, would be returning into the atmosphere and therefore, exerting their most direct influence on the inhabitants.

The number of investigators who believe in the miasmatic infection theory is increasing, as well as the number of those who believe in its bacterial origin. Bacteria have been found in the blood, and there is some degree of truth in the idea, else why should germicides, such as the salicyl and phenol derivatives, be of such great benefit in the treatment? One writer says that bacteria constitutes the specific cause of rheumatism.

"The germs, by elective affinity, find lodgment in the lymph spaces, more especially in synovial sacs. The germs in this situation excite, not true inflammation, but engorgement of the tissues with serous effusion and consequent heat, tumefaction, and pain, during the continuance of which a ptomaine is engendered, that is carried in the venous blood through the right cavities of the heart to the lungs, where contact with air, or oxygen from the air-cells, adds to its toxic or irritant qualities, thereby causing it to act as an excitator of true inflammation in the left endocardium."

The same writer says: "In the joints we have a simple serous effusion containing a few epithelial cells, except when thrombi in the surrounding small blood-vessels may set up destructive changes; but in the heart and pericardium we have a true inflammation, with tissue adhesion and organized lymph on the valves of the heart and subcardium, as well as, in a certain per cent. of cases in the pericardium."

"The engorgements and exudations in the articular strictures are first in the order of pathological changes and are the direct result of the action of organic germs in the synovial sacs; while the cardiac inflammation is caused by ptomaines resulting from microbic action in the articulations and conveyed from thence in the blood, to the cardiac structures."

Harkin, of Belfast discards alike the etiological influence of bacteria, miasmatic infection, lactic acid, or any other acid in the blood, and says: "I have recorded my opinion that the proximate or exciting cause of acute rheumatism is a chill, and that the morbid effect is produced through the agency of the nervous system; that it is essentially a specific form of endocarditis; and that the cardiac affection is not mainly an incident, or an occasional complication, in reality the initial or seminal principle from which sprung up the myocardiac, arthritic, pericardiac, pleuritic, meningeal, and other occasional developments and complications of the disease. I believe that endocardial inflammation is always present in acute rheumatism, but not always recognized, and not always recognizable in its early stages, but that in such cases

its presence is always to be presumed and taken into account, and provided for by appropriate treatment. Rheumatism occurs at all ages, but is more frequent between the ages of 15 and 40. It prevails mostly in humid climates.

There is a great deal of it in California, particularly on the coast, this being the region of fogs. Great depression, caused by overwork or anxiety, or any habitual drain on the system, such as an overlactation without a corresponding supply of food, makes the system susceptible to the cause producing the disease. Persons having suffered once from this disease, are liable to a recurrence if there is a renewal of the exciting cause. Gonorrhea is frequently the cause of rheumatism, which has been called by Ricord "blenorragic arthritis."

This however, is usually attended with less fever, fewer joints are involved, and there is less tendency to shift from one joint to another. Usually, when the gonorrhea ceases the joints present the appearance of inflammation, but seldom or never leads to exudation of lymph, or to suppuration, and the inflammatory condition often subsides in a few hours. When the inflammation attacks the pericardium or the endocardium, there is apt to be exudation of lymph, and sometimes suppuration. It is a constitutional disease, attended by febrile disturbance, manifesting itself by inflammatory affections of the fibrous tissue of the joints. It is neither contagious nor infectious, but is often hereditary. In the infectious diseases the articulations are sometimes the seat of disease, giving rise to that condition known as infectious pseudo-rheumatism, involving usually the large joints and becoming grave complications. Attention has been called to the fact that rheumatism is a possible factor in the etiology of epilepsy. Persons suffering from rheumatism have been known to have epileptic seizures. Cutaneous anesthesia in regions corresponding to diseased joints is sometimes noticed, and may be due to lesions in the central nervous system. Frequently there are marked cerebral symptoms in acute articular rheumatism. This feature, however, only obtains when there are complications, as pericarditis, endocarditis, meningitis



which may be a metastasis, or hyperpyrexia. It manifests itself by restlessness, passing into stupor or coma, or delirium. The latter is scarcely ever of a fierce nature; sometimes there are convulsions, the breathing is rapid, pulse frequent, temperature apt to be high, at times the patient seems to go into a typhoid condition. All of these phenomena may be due to renal complications. In acute rheumatism there is not always a well marked chill or rigor as a conspicuous symptom.

In the commencement of the disease it is sometimes entirely absent. Fever is, as a rule, gradual in development, and rarely attains a very high stage before the third day. After the accession of the fever, the pains seem to be concentrated in the joint, then we have heat, swelling and redness. The swelling is due largely to fluid within the capsule of the articulation. In this condition the tissues surrounding the joint are tense, and fluctuation can only be detected by firm pressure. Therefore a loose and baggy condition of the tissues indicate a lessening of the inflammatory condition, and the beginning of absorption. The pain of the disease is intensified by the stretching of the capsule caused by the accumulation of fluid pressure upon the nerve filaments. The pain is often so great that the patient fears the slightest touch; the contact of the clothing, or shaking of the bed will cause the most excruciating pain. The patient's appearance indicates suffering and a dread of being approached; he keeps in one position, which frequently produces a strain on the system, and of course, nervous symptoms follow. The skin is usually warm, but not dry and burning as is found in other diseases with elevated temperature. The surface is often bathed in perspiration of an acid odor and reaction. The urine is acid, high colored, and of high specific gravity, usually scanty; but polyuria is sometimes a concomitant, and lasts throughout the disease. The pulse varies, sometimes it does not go over 100, then in other cases, it runs up to 120 or more. Ordinarily the temperature during an attack of rheumatism is not above 104° F. but in some cases it goes as high as 108° F. with furious delirium. The sudden supervention of hyperpyrexia in

the course of an attack of rheumatic fever, associated with delirium, constitutes a most formidable complication, and requires prompt treatment. Such a condition was formerly thought to be a metastasis to the brain. With hyperpyrexia there is great thirst, dry tongue, anxiety, sleeplessness, dry skin, sometimes perspiration. The pains in the joints may subside, the delirium may be followed by stupor, coma or convulsions. Temperature may go from 104° to 108° in a few hours. These symptoms come on at any stage of the disease, even when convalescence is established. As a rule the degree of pyrexia in rheumatic fever bears some proportion to the intensity of the inflammation. The synovial membrane of the joint is usually the seat of the disease.

The urine contains quantities of uric acid, and about ten per cent. of the cases are complicated with pericarditis. Sometimes there is thickening of the synovial capsule and degeneration of the cartilages, which cause stiffness and impede locomotion. The disease frequently recurs. Pyrexia sometimes precedes the local manifestations, but this interval is never long. The disease is never truly apyretic; while in the greatest number of cases the fever gives but little trouble, still it should be regarded as of the greatest moment, and deserves our best efforts to check it. The temperature may be said to have no regular type. Usually the temperature reaches its height at about the fourth day, and may remain so for a few days before the decline is seen. There are often exacerbations which announce the invasion of new joints or a recurrence in a joint previously affected. On the other hand the temperature may rise without any appreciable cause, perhaps from a change in the weather, or attempts at exertion. The temperature of the joints, if inflamed, usually indicates from one to two degrees higher than the contiguous portions of the limb. The knee joint is more often the seat of the disease than the other joints, but all are liable to be involved.

#### TREATMENT.

Blisters of small size in the region of joints affected, are used by many. Har-kin uses a blister four by three inches over the cardiac region for eight hours,

followed by a dressing of cotton-wool; this procedure while doing good in many cases, has never been popular. The alkalies, as bicarb. of sodium or of potash, and the nitrate of potash, have been used with good effect. Resin of guaiac is beneficial only in abating the pain. It has no effect on the swelling. Salicylate of sodium in 15 to 20 gr. doses, will cause an amelioration of the symptoms in from thirty-six to forty hours; but in the hyperpyrexia it does not have nearly so good an effect as the more pronounced antipyretics, as antkamnia. The hyperpyrexia frequently requires cold water applications and sometimes the cold pack. The temperature should not be allowed to rise above 105° F. if the cold pack is used. After the temperature goes down to 100° or 99° F. the patient should be placed in warm blankets; otherwise symptoms of collapse may appear. Quinine is needed in some cases, but does not seem to lower the pyrexia. Iron is often indicated, and is best given as a malate. This obtains particularly in cases where spanemia is present.

In the hyperpyrexia, the antkamnia given in 8 gr. doses to the extent of

40 or 50 grs. in twenty-four hours, will be of efficacy in reducing the fever. Antkamnia is also a great pain destroyer, and in this regard is what is usually needed in acute rheumatic fever. Patients appreciate the fact that you relieve their pain without giving them morphia. It does not depress the heart, but seems to strengthen its action. As a reducer of the pyrexia, it has an excellent and splendid influence, regardless of the intensity of the febrile condition. In the endocardial and pericardial troubles in this disease, its action is all that can be desired. The patient's bowels should be kept open. Alcohol is rarely needed. The diet should be light; milk and the farinacea, together with some light meat broth, is all that is necessary. Water is desired frequently and should be given; particularly the effervescing waters and lemonade. The patient should be well protected from the cold, but the bed covering should not be too heavy. A good plan in some cases, is to envelop the joint in cotton batting after having painted it with tincture of iodine. Hot fermentations are frequently grateful.





